

C. REMARKS

Claims 1-6 and 45 have been cancelled without prejudice, and claims 55-60 have been added. The fact that Claims 1-6 and 45 have been cancelled without prejudice is not to be construed as an admission by Applicants or Applicants' attorneys that such claims are not patentable, and Applicants reserve the right to prosecute such claims in a continuing Application.

Claims 1-6 and 45 stood rejected under 35 U.S.C. 102(b) as being anticipated by Gissmann, et al. (W099/18220) (Gissmann '220). This rejection is respectfully traversed.

Claim 55 defines an aspect of the present invention directed to a chimeric HPV L1 protein which includes at least one portion of HPV-18 L1 protein and at least one portion of HPV-45 L1 protein.

Gissmann '220 discloses capsomere vaccine formulations which comprise a first intact viral protein expressed as a fusion protein with additional amino acid residues from a second protein. Preferably, the first viral protein is an HPV L1 protein or L2 protein. Preferably, the second protein is an early protein from human papillomavirus. In the working examples, the fusion proteins which are generated are fusion proteins which include (i) HPV 16 L1 protein, or HPV 16 L1 protein from which C-terminal amino acid residues have been deleted, and (ii) portions of the HPV 16 E7 protein or an influenza antigen.

Gissmann '220 does not disclose or even remotely suggest to one of ordinary skill in the art a chimeric HPV L1 protein which includes a portion of HPV-18 L1 protein and a portion of HPV-45 L1 protein. Therefore, Gissmann '220 does not anticipate Applicants' chimeric L1 protein as claimed, nor does Gissmann '220 render Applicants' chimeric L1 protein as claimed obvious to one of ordinary skill in the art. It is therefore respectfully requested that the rejection under 35 U.S.C. 102 (b) be reconsidered and withdrawn.

Claims 1-4 and 45 stood rejected under 35 U.S.C. 102(b) as being anticipated by Gissmann, et al. (W096/11272) (Gissmann '272). This rejection is respectfully traversed.

Gissmann '272 discloses recombinant papillomavirus virus-like particles in which sections of the L1 and/or L2 proteins are deleted. Gissmann '272, however, does not disclose or even remotely suggest to one of ordinary skill in the art a chimeric HPV L1 protein which includes at least one portion of an HPV-18 L1 protein and at least one portion of an HPV-45 L1 protein. Therefore, Gissmann '272 does not anticipate Applicants' claimed chimeric HPV L1 protein, nor does Gissmann '272 render Applicants' claimed chimeric HPV L1 protein obvious to one of ordinary skill in the art. It is therefore respectfully requested that the rejection under 35 U.S.C. 102(b) be reconsidered and withdrawn.

Claims 1, 2, and 45 stood rejected under 35 U.S.C. 102(b) as being anticipated by Lowy, et al. This rejection is respectfully traversed.

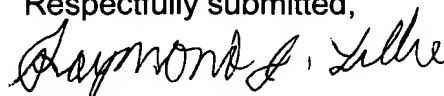
Lowy discloses papillomavirus virus-like particles which include an L1 protein and an L2 fusion protein, which may be a chimeric L2 fusion product. Examples of L2 fusion proteins include fusion proteins of HPV16 L2 protein and HPV16 E7 protein, and fusion proteins of BPV L2 protein and HPV16 E7 protein.

Lowy, however, does not disclose or even remotely suggest to one of ordinary skill in the art a chimeric papillomavirus L1 protein, and clearly does not disclose or even remotely suggest to one of ordinary skill in the art a chimeric L1 protein which includes at least one portion of HPV-18 L1 protein and at least one portion of HPV-45 L1 protein. Lowy, therefore, does not anticipate Applicants' chimeric HPV L1 protein as claimed, nor does Lowy render Applicants' chimeric L1 protein as claimed obvious to one of ordinary skill in the art. It is therefore respectfully requested that the rejection under 35 U.S.C. 102(b) be reconsidered and withdrawn.

With respect to the rejection under 35 U.S.C. 112, first paragraph, the Examiner has admitted that the specification is enabling for chimeric HPV-18/HPV-45 L1 proteins, which induce a humoral immune response. Therefore, Claims 55-60 are enabled.

For the above reasons and others, this application is in condition for allowance, and it is therefore respectfully requested that the rejections be reconsidered and withdrawn and a favorable action is hereby solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Raymond J. Lillie", written in a cursive style.

Raymond J. Lillie

Registration No. 31,778

#241553 v1